

<b>Adaptations and competition</b>	
Plants compete with each other for these (4)	Light, space, water and nutrients
Animals compete with each other for these (3)	Food, mates and territory
Features that organisms have to enable them to survive in their environment	Adaptations
Animals may be adapted for survival in dry and arctic environments by means of... (4)	<ul style="list-style-type: none"> <li>• Changes to surface area to volume ratio</li> <li>• Thickness of insulating coat</li> <li>• Amount of body fat</li> <li>• Camouflage</li> </ul>
Plants can be adapted to survive in dry environments by means of... (3)	<ul style="list-style-type: none"> <li>• Changes to surface area, particularly of the leaves</li> <li>• Water-storage tissues</li> <li>• Extensive root systems</li> </ul>
Animals and plants may have these to deter predators (3)	Thorns, poisons and warning colours
Organisms that live, and are adapted to survive, in environments that are very extreme.	Extremophile
Conditions that extremophiles can be tolerant to (3)	<ul style="list-style-type: none"> <li>• High levels of salt</li> <li>• High temperatures</li> <li>• High pressures</li> </ul>
<b>Indicator species</b>	
Two factors that can affect the distribution of organisms in an environment (2)	<ul style="list-style-type: none"> <li>• Change of competitor (e.g. grey squirrels outcompeting red squirrels)</li> <li>• Change in average rainfall</li> <li>• Change in temperature</li> </ul>

Organisms that indicate water pollution and the pollution type they can indicate (2)	<ul style="list-style-type: none"> <li>• Invertebrate animals</li> <li>• indicators of dissolved oxygen levels in water</li> </ul>
Organisms that indicate air pollution and the chemical they indicate (2)	<ul style="list-style-type: none"> <li>• Lichens - indicators of air pollution</li> <li>• Particularly sulphur dioxide concentrations</li> </ul>
<b>The carbon cycle and decay</b>	
The source of energy for most communities of living organisms	Radiation from the Sun
Green plants and algae do this with light energy	Photosynthesis
The arrows in a food chain represent this	The transfer of energy
The mass of living material in an organism	Biomass
This always goes at the bottom of a pyramid of biomass	The producer
Energy is lost between stages in the food chain because...(3)	<ul style="list-style-type: none"> <li>• Stored in uneaten materials (urine, faeces, fur etc)</li> <li>• Released during respiration and used for movement and living processes</li> <li>• Lost as heat.</li> </ul>
Biomass is lost between stages in the food chain because...(3)	<ul style="list-style-type: none"> <li>• Faeces and urine not eaten</li> <li>• Some organisms (or parts of organisms) die and are not eaten</li> <li>• Product of respiration (CO<sub>2</sub>) is breathed out</li> </ul>
Farming methods that reduce energy loss from animals to ensure maximum growth (2)	<ul style="list-style-type: none"> <li>• Limit animals movement in pens</li> <li>• Heat the pens</li> </ul>

The breakdown of dead organisms and waste	Decomposition
Organisms that carry out decomposition	Microorganisms
Why decomposition/ decay is important for living organisms	It releases substances needed for plant growth.
3 conditions needed for decomposition to happen (3)	Warmth, moisture, oxygen (aerobic environment)
Molecule that carbon is trapped in in the atmosphere	Carbon dioxide
Plants and algae do this to remove carbon dioxide from the atmosphere	Photosynthesis
Molecules that plants insert carbon into (and store energy in) (3)	Fats, protein, carbohydrates
Process that transfers carbon from plants to animals	Feeding
Molecules that animals insert carbon into (2)	Fats and protein
Carried out by living organisms to release carbon dioxide and energy from food	Respiration
Process that releases the carbon from wood and fossil fuels back into the atmosphere as carbon dioxide	Combustion